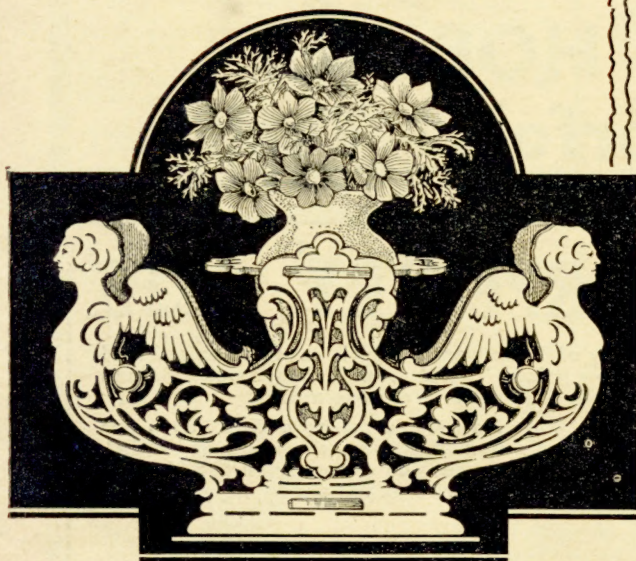


# Hobbies

## WEEKLY



Large Design  
free for this

### NOVEL VASE HOLDER

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Making an  
Hawaiianette

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Wood Puzzles

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A Dart Set

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Chemistry

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February 12th. 1938

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Vol. 85. No. 2208

**THE FRETWORKER'S AND  
HOME CRAFTSMAN'S JOURNAL**



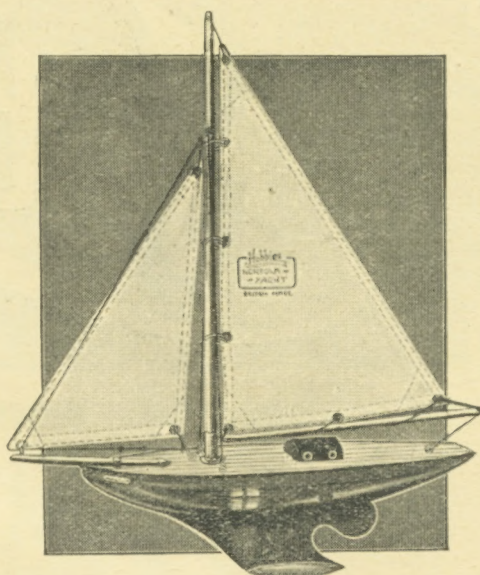
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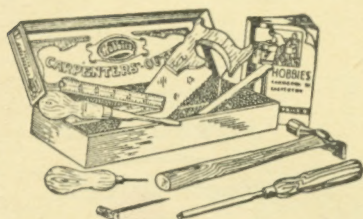


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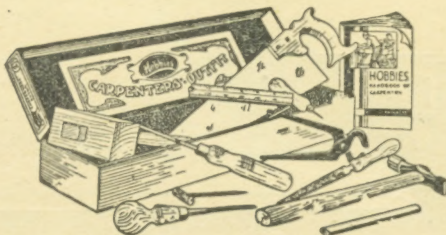
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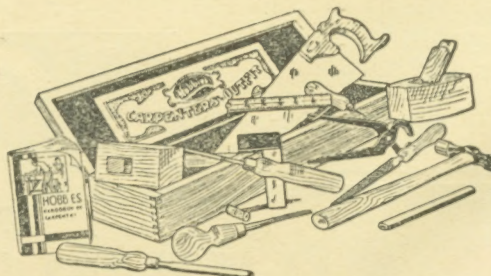
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# Hobbies

## WEEKLY



February 12th. 1938

Vol. 85. No. 2208

## TABLE VASE STAND

THOSE who like figurework introduced into fretwork will be delighted with the opportunity provided this week. Here we have a striking piece of work forming a very unusual type of vase holder. It would form an excellent piece for any table or sideboard, or even the stand in the hall.

It is fitted, as can be seen, with a tapering shaped vase large enough to hold quite a reasonable number of flowers, and the whole thing is supported between two graceful figures cut out in wood in a striking and picturesque manner.

### Grain Direction

As usual, designs are provided full size on the sheet, so it is a simple matter to paste them down to the boards of the thickness mentioned against each. Notice, by the way, that the grain should run in a certain direction in order to provide the greatest strength for each of the pieces of work.

This is indicated by the arrows on each of the patterns, and must be followed out in pasting the parts down. Cut round each pattern fairly closely with the fretsaw, then put it down to the board as required.

The vase holder is made up almost in two complete parts, and there is a back portion exactly similar to the front which can be seen in the picture. The two are held apart by various support or stretcher pieces running between.

These stretcher pieces are tenoned into the sides, and so make quite a rigid joint. At the

same time, they are not just the plain strut pieces found in ordinary fretwork, but are made shapely and artistic so they lend themselves to the rest of the design.

In addition to acting as supports for the sides, the two main ones also form the holder of the vase itself. Altogether there are four of these cross pieces, and they can be seen by the slots shown in the pattern of the sides at A, B, C and D.

The one at A has the support piece only between the two sides, but the parts at C and B each have a circular opening to hold the vase. Then the two pieces lettered D are put between the ends to help steady the figurework, and at the same time to provide a handle by which the whole thing can be lifted.

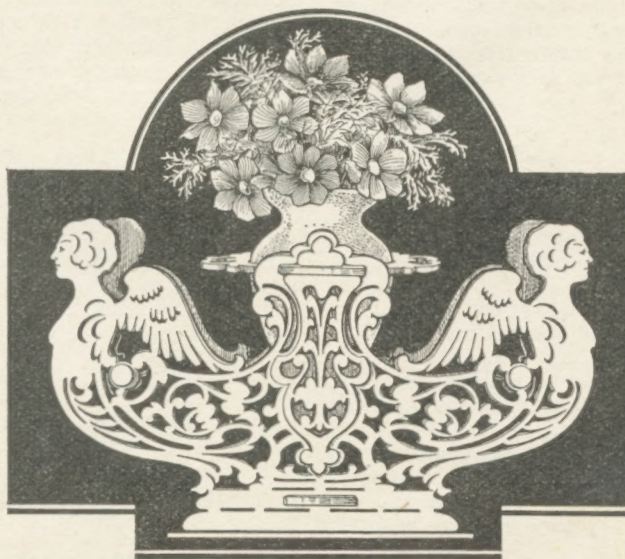
### Projecting Tenons

It would not, however, be slightly to have all these tenons shown projecting through the long sides, so in some cases they are cut off short then the ends covered by ornamental work of some

kind. In two instances, however, the tenon projects right through the side, and the end of it is therefore rounded off in order to make it look less unsightly.

The two projecting ones are at A and C. The one at B is covered by the overlay, whilst those at D are covered by little circular discs glued over.

As can be seen, most of the parts are cut in  $\frac{3}{16}$ in. wood with thinner material ( $\frac{1}{8}$ in.) for the overlays on the





side. As the design is balanced up so much, one must take particular care to cut out the parts alike. A good plan in cutting, therefore, is to do the same fret in each side directly following each other.

That is, if you are cutting the wing portion of the figure in one side, complete that then go to the same wing portion on the other side of the same portion. Thus you can be sure of keeping all the frets symmetrical and alike.

### Balanced Cutting

Notice that the link pieces holding the design together are all similarly joined. Do not make the leaf in one side large, and small in the other. Do not get a curve which is unduly thick at one end of the side, then cut it thinner when you are at work on the similar portion for the other end.

All these little points go to make up the difference between good and bad cutting. As, too, both sides of the wood will be seen quite clearly, it is essential to keep the reverse side sharply cut then cleaned up nicely. Pay as much attention to one side of the board as the other, and after you have cut out the design, clean it up thoroughly.

When you are testing out the tenon joints with the slots in the side, do not forget to mark out one, then it can be returned to the same position when you are finally gluing the parts together.

### Joints First

A good plan is to cut these tenons and mortises first, and to test them out to see that a good joint has been secured, then you can go ahead with the other work—the frets—the exterior outline, and so on.

If, on the other hand, you cut all the interior work first, then cut the mortise or the tenon, you may find you have spoiled the whole thing by a bad joint. Make sure of your joint first, therefore.

All these cross pieces, too, must be exactly the same length between the shoulder and the tenon, and they should be laid together to test out for this.

If the cross rail at one end, for instance, is longer than that at the other, it will push the two sides apart and so either strain the joint at the centre, or else make a gaping tenon which will look unsightly.

### Test before Gluing

Get the two sides and all the rails cut first, therefore, and test out each of them ready for fitting together finally. Then all of them can be glued in place, taking care that no unsightly glue is pressed through the mortises and left to be seen on the outside.

Have the vase at hand so you can place it in position in the upper and lower platform. See that it beds down nicely and does not wobble about. If you wish, you can taper the hole in the floor so that portion of the vase beds in more snugly.

Cover the little tenons D with the small round discs cut from  $\frac{1}{4}$  in. wood, then the join of the centre portion holding the bottom of the vase is covered by an overlay of similar shape to the design on the side itself.

This overlay can, if you wish, be backed up with some fancy material—silver paper would make it look quite good—or you could use the veneer paper supplied by Hobbies, or even the linen cloth which is obtainable in several colours.

### Tenons

This overlay on the side, by the way, is glued up under the projecting tenon at the top, and the outline should then be parallel to the fretted work in the sides.

Above the tenon are fitted two little side overlays. The bottom edge of these is straight so they stand down on to the tenon which projects beyond the side itself.

We should not recommend plywood for any portion of this vase holder because so many edges are seen that they will look unsightly. It is far

### MATERIALS SUPPLIED

*Fretwood.*—For making this design we supply a parcel of selected Whitewood, 2/6 post free 3/-.  
*Fittings.*—New art vase No. 6007, 1/3 post free 1/7.  
Complete parcel wood and vase 4/3 post paid.

better to use whitewood or some similar fancy fretwood. A special parcel where all the parts are supplied to the sizes required, and in the proper thicknesses is obtainable quite reasonably from Hobbies as shown in the Material List herewith.

## CRAMPING DEVICES

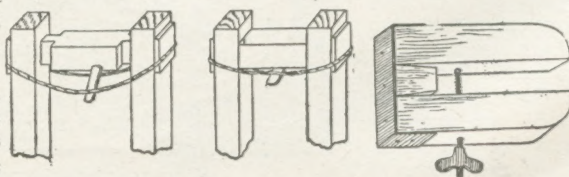
It is not every amateur woodworker that possesses cramps and occasion must arise when they would be useful.

The simple method illustrated here overcomes that difficulty. A piece of stout string fixed round the frame with small pieces of wood inserted to protect the wood is tightened by turning the peg in a loop. This pulls the joints up, and provided the string is strong, a considerable pressure can be obtained that will hold the frame together satisfactorily.

### A Simple Cramp

This small cramp, which is useful for light work is made of hardwood and held together by a leather band and a bolt and wing nut.

There is no limit to the size of these and it would be advisable to have a set by you in sizes ranging from 4ins. to 12ins. The size of the bolt would vary accordingly.





# A TWO-STRING HAWAIIANETTE

THE Hawaiianette is a new 36in. long musical instrument with a sweet, singing tone. Its construction will be the easiest you've ever tackled and, apart from this, it will be the cheapest and simplest instrument you've ever played.

There are no frets. Just a few scale positions identifiable by discs of mother o' pearl or white celluloid inlaid along the fingerboard. Sharp and flat notes are found between the discs. You can play popular melodies right away, this being accomplished by means of a "comb" (a bar of wood with fret wire along one edge) and a celluloid plectrum.

If desired, fret wire can be embedded along the fingerboard in the usual way for playing tunes in principle to a mandolin. The two steel strings are both tuned to the same pitch or key, such as middle G or C on the piano.

No knowledge of music whatsoever is necessary to play this novel instrument which will give you hours of enjoyment.

## Neck and Body

For the neck, you will need a piece of satin walnut 35 $\frac{7}{8}$ ins. long by 2 $\frac{7}{8}$ ins. wide by  $\frac{7}{8}$ in. thick. Having squared it up to size, proceed to mark it out with pencil, set-square and the compasses to the shape and dimensions provided at Fig. 1. Note the width is reduced by  $\frac{1}{8}$ in. for the thickness of the body top piece. Fig. 2 is helpful in this connection.

When the neck has been cut to shape with a keyhole saw and spokeshaved and glasspapered, mark out on  $\frac{1}{8}$ in. sycamore and mahogany fretwood the body top (that with the sound holes) and bottom respectively, both being the same shape and size.

## Stiffening Blocks

On the interior side of each, have parallel lines ( $\frac{3}{8}$ in. apart) running centrally down the length to indicate the position of the neck.

The bottom piece could be glued and lightly pinned to the neck to project  $\frac{1}{16}$ in. Blocks of deal are shaped and made to fit against the neck

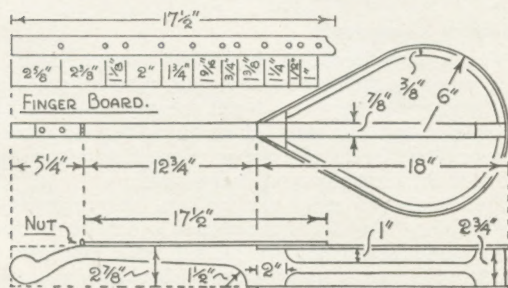
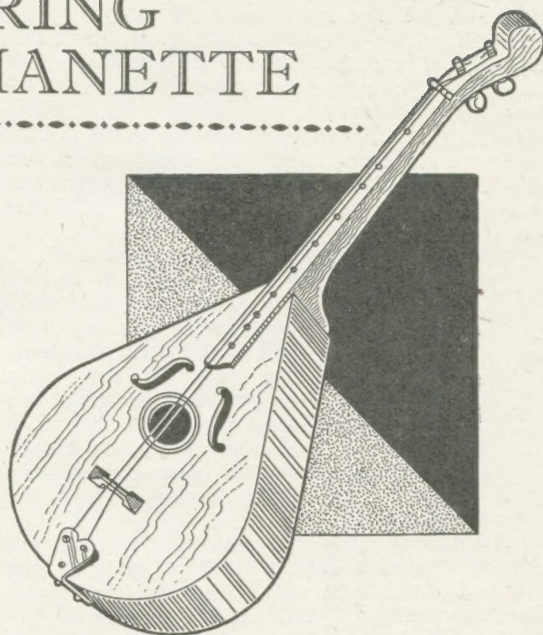


Fig. 1—Top and side elevations giving dimensions



to show a  $\frac{1}{16}$ in. margin for the thin plywood sides which are bent around.

Fillets now need to be cut from  $\frac{1}{8}$ in. wood similar in shape to the body pieces, but less  $\frac{1}{16}$ in. all round (see constructional view). The fillets are  $\frac{3}{8}$ in. wide and four are required.

They are then fitted to the bottom (that is, between the shoulder blocks and rear end of the neck) to show  $\frac{1}{16}$ in. all round. Simply glue in place and hold thus temporarily with panel pins.

This also applies to the top body part, the fillets being affixed around to the pencil lines, after which the top can be glued and pinned in place as seen by the side elevation.

## The Plywood Sides

When the fillets have dried in place, carefully remove the panel pins (these should have been tapped in with the heads projecting). You will now require a strip of thin mahogany plywood approximately 47ins. long by 2 $\frac{3}{4}$ ins. wide by  $\frac{1}{16}$ in.

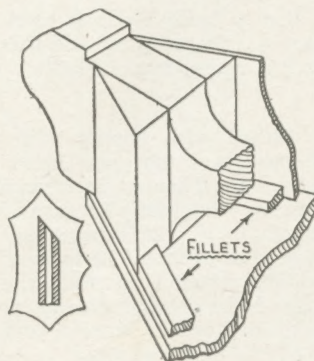


Fig. 2—Constructional view of the shoulder

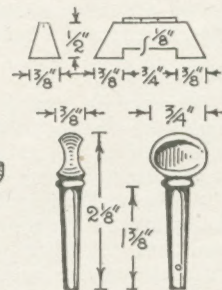


Fig. 3—Size and shape of head pegs and bridge



thick—or alternatively, two strips the same width and thickness, but about 24ins. long.

The strip (or strips) should be, if possible, shortgrained for convenience in bending. If long-grained, however, it can be easily bent to shape by steaming.

To do so, fill a kettle with water until nearly level with the spout hole inside, then replace the lid and boil on a fire or stove. Do not steam the wood too much lest you weaken the adhesive holding the veneers together.

With the long strip, it is only a matter of bevelling one end (see inset detail at Fig. 2) to suit

the shoulder shape, then temporarily pinning the end to the block even with the edges of the body shapes and bringing the strip around to the other shoulder block and bevelling the other end suitably after having judged the

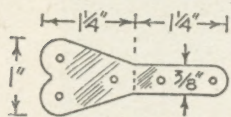


Fig. 4—The tail piece

approximate length.

With the two strips, the ends are bevelled and brought around to the centre of the body at the rear end of the neck and joined or vice versa. The join must meet in the centre of the neck end.

When fitted, the strip (or strips) can be removed and glued and nailed permanently in place. The nails should only be driven in at the blocks and neck end. Sink the heads slightly with a punch and fill in with coloured plastic.

### The Fingerboard

The fingerboard strip is first shaped and glued along the neck and part of the body after the latter has been glasspapered. The underside of the neck handle is rounded with spokeshave and rasp, whereupon two 1/4in. peg holes are bored through the head.

Having marked out the disc positions on the fingerboard, bore 1/16in. holes 1/16in. deep and fill in with discs of pearl or white Ivorine. If you

### Chemistry—(Continued from opposite page)

method of making sure is to immerse the blade of a knife in the solution. If you are correct in your supposition the blade will quickly acquire a red coating of copper.

The explanation is that a knife blade is composed of a more active metal than copper, and this has the effect of displacing copper from its salts.

### About Mercury

Mercury is usually linked with copper, since these are the first two metals which come below hydrogen in the activity list. This bright silvery liquid metal is very well known, chiefly because of its high specific gravity of 13.596. It is sometimes found free in nature but more often in the form of cinnabar, its principal ore, which is actually the sulphide of the metal. It is located chiefly at Almaden, in Spain, and in Austria, Mexico, and California.

To obtain mercury on a large scale, cinnabar is roasted in air in a suitable furnace. Sulphur

desire to embed fret wire, the distances of all notes are between the positions given. Whether you use mother o'pearl or celluloid, the surface of the board can be glasspapered.

The nut is a piece of hardwood or bone 7/8in. long by 1/4in. wide by 1/8in. thick. Round the top edge and cut two nicks 3/16in. apart with a penknife.

The bridge is shaped as in Fig. 3, a piece of fret wire being embedded on the top. If you prefer to make pegs, sizes are provided at this figuration, but such can be bought quite cheaply. The tail-piece shown at Fig. 4 is cut from 1/16in. brass, then drilled and bent to shape.

### Varnish and Strings

To finish the work, simply clear varnish or polish the whole, no staining being necessary. The tail-piece is affixed with three roundhead brass screws. The strings used are two Black Diamond banjo (2nd steel) strings costing 4d. each.

You can use 2nd guitar strings or other plain (not wire-covered) strings if they are long enough to stretch from the pegs to the tail-piece. A plectrum and comb can be obtained from any instrument shop or you can make such from celluloid and wood.

When playing the Hawaiianette, place it across the knees similar to guitar playing. A beautiful tremolo effect can be obtained by quivering the comb after sliding it up to open bars such as near the end of a piece of music. The third finger rests lightly on the strings behind the comb.

### MATERIALS REQUIRED

- 1 satin walnut neck, 36ins. by 2 1/2ins. by 1/2in. thick.
- 1 mahogany back, 18ins. by 12ins. by 1/2in. thick.
- 1 sycamore front, 18ins. by 12ins. by 1/2in. thick.
- 2 plywood strips, 24ins. by 2 1/2ins. by 1/16in. thick.
- 1 piece deal blocking, 6ins. by 2ins. by 1/2in. thick.
- 1 walnut finger-board, 18ins. by 1/2in. by 1/2in. thick.
- 1 fillet piece, 18ins. by 12ins. by 1/2in. thick.
- 1 piece brass, 3ins. by 1in. by 1/16in. thick.
- 1 piece Ivorine, 6ins. by 3ins. by 1/16in. thick.

A price for the above materials is obtainable on request from the Editor.

NOTE.—All fittings can be obtained locally.

dioxide is the only other proper product and this eventually escapes by means of flues while the mercury condenses.

This process can be very easily imitated by using mercuric oxide instead of the sulphide. Place a little of this in a test tube and heat it over your Bunsen, when the oxygen will be driven off and free mercury will be left.

### Poisonous Compounds

You are advised not to dabble too much with compounds of this metal since they are all poisonous in varying degrees. Such compounds may be recognised by the fact that they deposit their mercury on sheets of copper when the latter are warmed in solutions containing them.

Two series of salts are known, mercuric and mercurous. The former produce a scarlet iodide when their solutions are mixed with potassium iodide; the latter yield a greenish-yellow precipitate when similarly treated.



## NOTES ON COPPER

# HOME CHEMISTRY



**W**E referred in the last article to those beautiful bright blue crystals of copper sulphate. They are extremely fascinating and it is very difficult to realise that there is any connection between these delicate-looking particles and copper as we know it in the ordinary way.

This metal again is produced from ore, although a good deal is found in a natural state. Masses weighing as much as 400 tons have been found on the shores of Lake Superior.

### Preparing Copper Sulphate

You can prepare crystals of the sulphate by evaporating a solution, which is done by adding as much as possible to a flask of water heated to about 70 degrees. Add the sulphate in powdered form and continue to heat the solution until it is nearly boiling.

Now filter the liquid quickly into a glass jar or basin and stand it aside for a few hours. It will not be long before crystals begin to form, from which you can eventually select some of the finest as specimens.

It must be admitted, however, that by this method you merely end up with what you start with, and the only satisfaction you have is that of watching the crystals growing.

### Another Method

Quite a different way to prepare copper sulphate is by neutralising dilute sulphuric acid with copper oxide. Pour about 25 c.c. of the dilute acid into an evaporating dish, place it on a stand over a lighted Bunsen, and by small amounts add copper oxide, and occasionally water, to replace that which evaporates.

When this has become a saturated solution, filter it into a beaker surrounded by cold water and leave the filtered liquid for the crystals to grow.

You will find that the mixture in the evaporating dish first turns black, then, as stirring continues,

it takes on a brownish tint. A blue tinge first appears at the edges of the reddish-brown liquid until finally the whole of the liquid is deep blue. It is in this liquid that the lovely blue crystals eventually appear.

Copper itself is an extremely important metal, being an ingredient of many other commercial metals.

### The Uses of Copper

For instance, the special alloy of which bells are made contains about 80% of copper; gun metal contains 88% of copper and bronze sometimes as much as 90%. The sulphate, too, has many important uses, being both an insecticide and a germicide, and is of considerable value in electroplating and calico-printing. Its everyday uses in electricity are too well-known to need description.

Other compounds of copper are made as follows:

Black oxide of copper—by roasting metallic copper in air, or igniting copper carbonate.

Red oxide of copper—by dissolving a little copper sulphate in water, adding grape sugar, then excess of potash, and heating the mixture. You will quickly recognise the red powder which is deposited.

Copper hydroxide—by adding some soda solution to a solution of copper sulphate.

### Test for Copper Salt

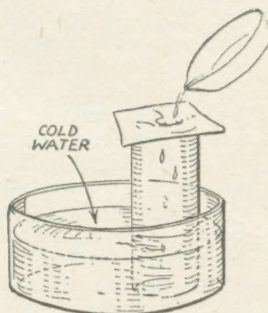
If you suspect that you are dealing with a copper salt and wish to make a test, moisten a sample with strong hydrochloric acid and hold it in a Bunsen flame. If it is in fact a copper salt the flame takes on a green coloration with a blue centre. Another method of testing copper compounds is by heating them on charcoal with potassium cyanide; the metallic copper is soon obvious.

If you are handling a liquid which you suspect may be a solution of a copper salt, a very simple

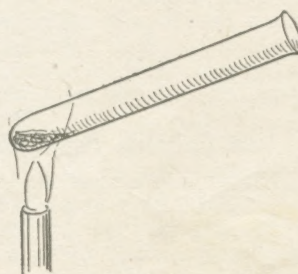
*(Continued on opposite page)*



The preparation of copper sulphate crystals—neutralizing and filtering



A test for solution of copper salt



Producing free mercury from mercury oxide



## NOTES AND NEWS

# MODEL AIRCRAFT TOPICS

### To Gear or Not to Gear?

**M**ODELS for the 1938 Wakefield Elimination Trials are now being planned, and 'to gear or not to gear' is one of the questions of the moment. Gearing is employed partly to save the strain on the fuselage of the twisted rubber-skein, but chiefly to enable thinner skeins to be used, and consequently, more turns being given and a longer flight obtained. This would appear to answer our question, but other factors have to be taken into account.

Some of the power of the rubber motor is expended in overcoming the friction of even a perfectly-made gear, while a gear that is not too well made may cause a serious power wastage. Bad gears have also a habit of stripping on the flying-field, thus putting the model out of action.

Then there is the lesser disadvantage of having two or more rubber-skeins to prepare and fit, each of them exactly alike. A competitor has quite enough points to watch, and anything which reduces the number is to be welcomed.

Many, therefore, prefer to rely on the simplicity of a single skein, obtaining as many turns as possible by using a long fuselage, and a skein  $1\frac{1}{2}$ - $1\frac{3}{4}$  times the fuselage length. All the power is then delivered to the propeller, and provided this item is suitable and the model properly rigged, a good climb should result.

In fact, an 'anti-stalling' device, such as down-thrust, is advisable to prevent the first burst of power terminating in a loop.

A long, single-skein motor, with a tensioning device, should be satisfactory in reasonably good weather, while gears are likely to prove helpful in non-soaring conditions.

Even if you do not feel competent to enter for the Wakefield Trials (when the British team is chosen), it is worth while learning to produce this class of model, as it seems likely to be specified for an increasing number of contests, in place of the old light-weights.

Further details will, therefore, be given from time to time of the multi-sided fuselage, single-strut undercarriage, and similar features, previously mentioned as desirable for Wakefield models.

### A Suitable Scale Model

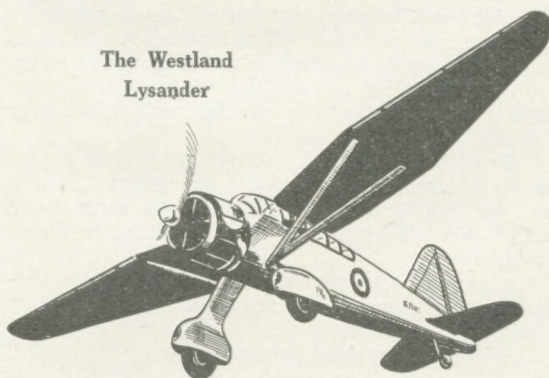
**M**ODEL aircraft figured largely at the School-boys' Exhibition at the Imperial Institute, South Kensington. One of the most striking examples was a small flying-scale-model of the Westland 'Lysander,' a high-wing Army Co-operation machine now being built in large numbers for the Royal Air Force.

This is one of the finest aeroplanes ever designed, and lends itself very well to the production of a flying-scale model.

Suitable motor cowlings are obtainable from sundry model shops, and though they offer greater head-resistance than the sharper nose of the average model, they certainly look realistic, and do not prevent excellent flights being obtained.

Another fine model was a 5ft. span Waco 'Custom' an American cabin biplane. This machine, which is obtainable in the form of a kit

The Westland  
Lysander



of materials, is most impressive in appearance, and a fine flier. The fuselage is doped scarlet, and the wings and tail silver.

By the way, if you want to build a scale-model for the annual contest for this class held by the Society of Model Aeronautical Engineers, remember that the scale now has to be 1 inch to 1 foot.

### A Novel Type of Model

**R**ECENTLY, excellent flights have been obtained on Wimbledon Common with a tail-less monoplane built by Mr. W. P. H. Goodsir, of Sutton. This novel type of machine is very stable. The tips of the wings are set at a negative angle of incidence while the root portion is set at positive or neutral incidence.

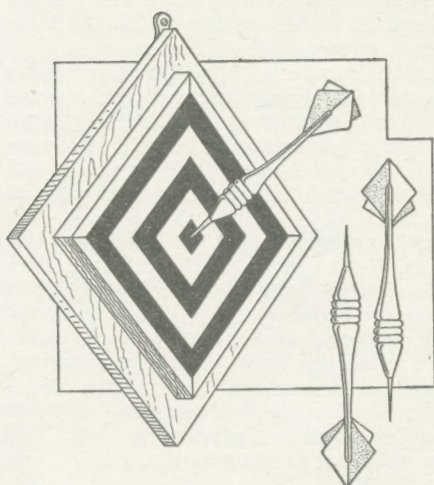
Then, when the roots approach a stalling angle, the tips take up the angle of maximum lift, thus restoring the machine to an even keel.

Mr. Goodsir's model is a handsomely proportioned, and perfectly-built mid-wing monoplane, with a beautifully-rounded 'monocoque' fuselage, consisting of circular frames covered with balsa sheet, highly polished.

The British 'Tail-less' record, which was established several years ago by Mr. F. B. Baggs, of Putney, stands at 90 seconds.

The Airman





**H**OW about a game of darts? Here are particulars of a simple, but novel end-grained board, with three neat, well-balanced darts, which should last you for years.

It will be seen that the face of the board is without wires and numbers. Why? Because the wires rather blunt the points of the darts, while the five square rings (three black and two white) have actually got numbers, same reading from the "bull" or centre, thus: 20, 0, 5, 10 and 15 respectively—but they exist only in your mind's eye!

It's quite easy to remember the different values or points of each black and white ring, then by way of changes and an added interest, the numerals or point values can be altered from time to time without, of course, any trouble.

You could make the "bull" 50 points, with the immediate ring always of extremely low value, this being done to mutual agreement.

#### Making the Board

The complete board is made from  $\frac{1}{4}$  in. birch plywood,  $\frac{1}{2}$  in. and  $\frac{3}{4}$  in. deal. With the deal, certain blocks require to be blackened with indian ink to obtain the contrasting rings. An alternative is to use mahogany and whitewood, but such becomes a little expensive.

Deal serves just as well, so an even-grained and knotless piece of  $\frac{3}{4}$  in. shelving should be procured in order to make the area of face blocks which are glued and built up as at Fig. 1. As it is imperative that the face is end-grained to ensure lasting service, both ends of a 10 $\frac{1}{2}$  in. wide board are squared and straightened with a plane.

#### Colour the Strips

Having this done, gauge  $\frac{1}{2}$  in. wide lines across both ends, then carefully remove the strips and continue in this manner until you have sufficient

#### MATERIALS REQUIRED

- 1 piece birch plywood, 12 ins. by 12 ins. by  $\frac{1}{4}$  in. thick.
- 1 piece deal, 12 ins. by  $\frac{1}{2}$  in. by  $\frac{1}{2}$  in. thick.
- 1 piece deal, 12 ins. by 10 $\frac{1}{2}$  ins. by  $\frac{3}{4}$  in. thick.
- 1 brass hanger No. 6134.
- 1 length dowelling 18 ins. by  $\frac{1}{8}$  in. diam.

## A SIMPLE DART SET

for the black and white rings, the former being inked or dyed at this juncture and allowed to dry thoroughly.

To build the area of blocks, commence with the  $\frac{7}{8}$  in. square. Four white blocks ( $1\frac{1}{4}$  ins. long) are glued around same, then four black blocks ( $3\frac{1}{2}$  ins. long) are glued around and so on until the area is complete as in the diagram.

Do the building on a flat surface such as the back-board and keep the coarse sides of the blocks uppermost, the planed sides being later turned face about.

#### Fixing the Back

This follows after the edging strips ( $\frac{1}{2}$  in. square) have been mitred and glued and nailed around the blocks. The rough side or surface is levelled as much as possible with a plane. On no account plane or glasspaper the face side.

Having levelled the back of the blocks, glue and screw the lot to the centre of the 12 in. square plywood back with  $\frac{1}{2}$  in. by 4 flathead brass screws. For hanging purposes, a hole could be drilled through at one corner or use made of a small brass hanger (see list).

#### How to Make Darts

As you know, you can buy really excellent feathered darts in most toy shops for 1d. and

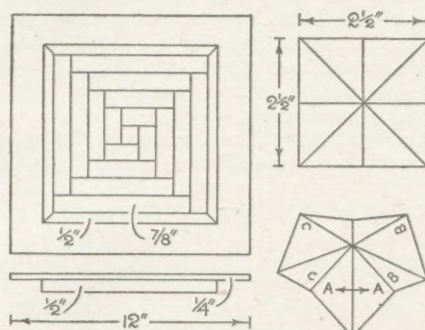


Fig. 1 — Back board and (below) end section, showing centre block arrangement

Fig. 3 — How to crease and fold the wing floats

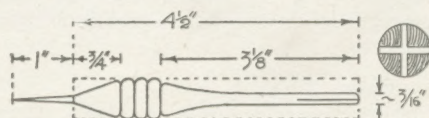


Fig. 2 — Dimensions of the dart handle

1 $\frac{1}{2}$  d. each. However, as you may prefer to make your own, obtain three 4 $\frac{1}{2}$  in. lengths of  $\frac{3}{8}$  in. dowelling or rounded pieces of hardwood.



Find the centres of the ends of one and scribe a  $\frac{3}{16}$ in. circle on one end, then drill the other suitably for a piece of steel knitting needle. Pointed pieces of 19-gauge wire serve admirably, too, but hackle pins are the proper thing to use if you can get them.

Those who are fortunate enough to have brothers, sisters or friends working in flax mills should have no bother in this direction.

When the ends of the dowels have been treated as described, pencil the four lines (giving the beading) around the circumference as at Fig. 2. With a 3-cornered file (or the corner of a flat file) and wood rasp, make V-grooves over the dowels and round to form beads.

#### Fitting the Float

The nose point and shafting is made with a penknife, rasp and spokeshave, the tapering of the latter being carried out to the  $\frac{3}{16}$ in. end circles.

Now cut a slit up the tail end with a coarse fretsaw to 1in. long, then make another cut so the kerfs cross as seen by the section at Fig. 2.

These slits are for the paper wings or fins which are now made. Simply crease three  $2\frac{1}{2}$ in. squares of paper (separately) as suggested at Fig. 3, then fold to give four fins as shown below. To do so, note that A closes on A, with B closing on B and C on C. The paper is inserted to the handles so each fin is divided by a section of the wood.

If desired, numbers could be inked on  $\frac{3}{4}$ in. circles of paper and glued on the black and white rings at the corners. It is a good thing to have a jotter handy for keeping a note of the scores of each player. Suppose one makes 25 in all, this is jotted down under his name, then when his turn comes again and he scores (say) 30 points, this is written down beneath the first score and added to make 55 and so forth to the winning total. You add as you go along, in other words.

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## ODD JOBS ABOUT THE HOUSE

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**A**RE you the handyman in the home? If so, you might—at some time or other—be asked to reduce the length of a wooden copper-covered curb or put iron (shell) sides in a kitchenette fire-grate or fit a new washer in a water-tap (without turning off the supply at the valve-cock in the street, back-yard, etc.) and you may not know just how to go about it. It is hoped, therefore, that by reading this article you will glean a few helpful hints on all three subjects.

#### Reducing a Curb

To reduce the length of a curb (say) 5ins., first find the centre of the front portion. If you wish to half-lap the parts together to reduce the length, mark (with pencil and set-square) lines completely around the metal covering 5ins. to the right and left of the central mark.

Cut over the lines with a hack-saw to remove the covering of sheet copper and the tin base 10ins. long.

The bared wood is then parted in the centre with a saw and the ends half-checked 5ins. to overlap one another nice and even. Having glued and screwed the join together, trim the edges of the copper and tin covering with the scissors to 6ins. long and affixed centrally over the join.

Any metal ornaments on the curb, of course, are removed prior to cutting away the covering. Don't forget that the wood can be simply doweled together, in which case 5ins. is completely removed.

#### Fire-grate Sides

The fitting of kitchenette grate sides is a problem to quite a lot of people. The "bell" make of "iron bricks" are the easiest to fit as they consist of a shell of iron. Such are obtainable in pairs (in two sizes) from the 6d. stores at 6d. each.

These sides usually have base tabs for inserting

between the grill bottom of the grate; such can be broken off (sidewise) inadequately. Should you be afraid of cracking the metal in consequence, however, the tabs can remain.

The sides are put in with  $1\frac{1}{2}$  parts of cement to 1 part of sand. About three-quarters of a bucketful should suffice. When mixed to a fairly thick consistency, brush dust and dirt away from the grate and wet with a scrubbing brush dipped in water.

The iron sides are then filled generously with cement and pressed neatly to their respective sides and held apart with a strip of wood forced tightly between. Any open seams are filled up and evened with a trowel or table knife.

#### That Leaking Tap!

That leaking water tap will give no more trouble for quite a time if the old leather washer is replaced with a rubber one. A card of three rubber washers costs 2d. at the stores and are well worth it.

To remove the old washer, arm yourself with a large cycle wrench, the pliers, nippers, screw-driver and a dish cloth. First of all, release the handle shank, then take out the screw at the casing and loosen the square nut which is part of the casing.

An empty bucket or basin is set directly below the tap to catch the plunger, while the dish cloth is set over the tap to prevent the gush of water when the casing is completely removed. Having carried this out, look in the basin for the plunger and remove the old washer from it and fit the new one.

The plunger is then inserted in the casing and held thus while you insert it gingerly into place again beneath the sodden cloth. A quick twist, and the water flows through the tap.

Then you simply repeat everything in the opposite way—and that's that!



# GET - THE - PIG - TO MARKET PUZZLE



**H**ERE is another wood puzzle for readers who are keen on these interesting designs. While being quite different from either, this puzzle is more or less standard in "finish" with the "colour" and "Galleon" teasers given some time ago, and the three together should make a pleasing set to bring out for the amusement of friends.

The puzzle consists of a shallow wooden box in which are loose blocks that can be slipped one at a time with the finger tip into new positions, and the game is to get "the pig," by these movements, to "market"; through the fords, boys, motor cars, etc.; in other words transfer the top left corner block to the bottom right-hand corner (see sketch).

## Constructing the Box

To do this takes far more movements than would at first seem necessary; and even when you have found a solution, further fun can be got from the puzzle by trying to see if it is possible to *reduce* the number of moves required to effect the change.

Now as to details of construction:—The box has a base of  $\frac{3}{8}$  in. material,  $3\frac{1}{2}$  in. by  $3\frac{1}{2}$  ins., along the sides of which are secured (by suitable "pins" and glue) the four pieces as shown,  $\frac{3}{8}$  in. thick and  $\frac{3}{8}$  in. wide, bevelling each to meet its neighbours at the corners.

A short "pin" at the bevelling makes everything very firm. Get the corners as tight as possible as this adds to the neat appearance of the finished puzzle, and when the side strips are fitted, smooth them off accurately with the base by means of a glasspaper block. Give the inside of the base a polished finish before fitting.

## The Sliding Blocks

Now prepare the sliding blocks. Take a piece of  $\frac{3}{8}$  in. light wood,  $3$  ins.  $\times$   $2\frac{1}{2}$  ins., give it a nice polish and then divide it along its 3 in. side by two fine pencil lines at the inch positions.

Mark the  $2\frac{1}{2}$  in. side at an inch from either end, which will leave a strip  $\frac{1}{2}$  in. wide in the centre. From these points mark lines at right-angles across the rectangle to the further edge.

Finally divide the middle top square, and the lower middle square, by horizontal lines and the lower end squares by vertical lines, also the middle strip (which is to become the dogs) by a line down the centre.

The whole rectangle is divided by the pencil lines into sections, either 1 in. square, or 1 in. by  $\frac{1}{2}$  in., bar the one middle section which is divided into two pieces  $\frac{1}{2}$  in. by  $\frac{1}{2}$  in.

## The Lettering

As the surface is "finished" already, the title of the blocks can be put on at this stage, before cutting. Indian ink and pen, or black paint and a brush, may be used. After the lettering is quite dry, turn the rectangle down on something soft and give the under side a final fine glasspapering to make it as smooth as possible; following which cut along the lines.

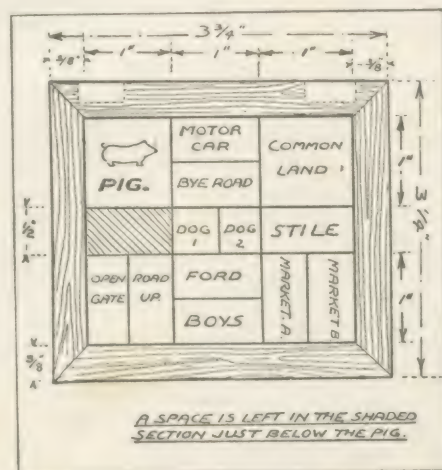
This should be done with some care as all the pieces must be interchangeable with other pieces of a similar shape while any two of the half sections should make up exactly the space occupied by any whole section.

## Fitting the Lid

Having cut, take each section separately and well smooth the sides and ends with fine paper. Also clean the corners so there will be no rough bits to catch when sliding the pieces about.

Having completed the blocks and case fit the lid. This is a rectangle of  $\frac{3}{16}$  in. material held by two small hinges to the "top" strip; care must be exercised in getting suitable short screws for securing the hinges to the lid, slightly longer than  $\frac{3}{16}$  in. may be used if the tips are filed away.

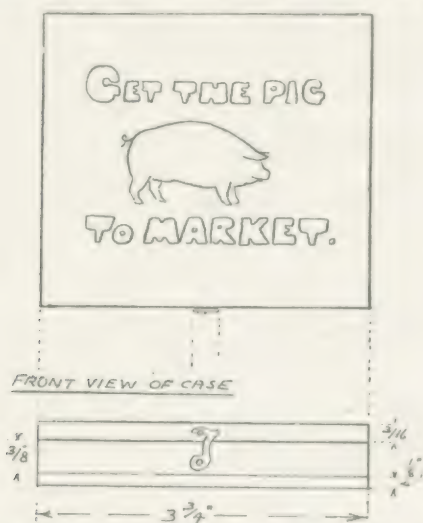
Stain the lid to a fairly dark tone and polish then securely glue on the inside a square of good



Dimensions and arrangement of the tray and blocks



paper telling the player what he has to do. "GET THE PIG TO MARKET—The puzzle consists in getting the pig (the top left-hand



The cover of the box and a side view of the parts

corner block) to the bottom right hand corner by sliding the sections about in the box. No section must be lifted out."

Nicely written (or printed) in indian ink or indeed typed, the square of paper will look quite neat. On the outside of the lid copy direct on to the wood the design as shown, and fill the letters in with a bright yellow varnish paint which stands out well against the dark stain.

Finish the top, sides and base with the same stain as the lid, but leave the inside base plain.

Complete the case by fitting a small fastener (as indicated) rotating on to a pin in the lid. The fastener can be bought or carefully fashioned out of a small rectangle of brass.

### The Correct Solution

The game is now complete and you will have considerable enjoyment working it out. Just in case you *cannot* do so, we append a solution. This, however, is not the least number of moves in which it can be done, and we expect you will soon find a way of cutting this total by quite a few.

The letters (U), (D), (L) and (R) mean "up," "down," "left," and "right," respectively, while the other letters are the initials of the block title, as per example MC is Motor Car. Thus MC (L) indicates the Motor Car block is moved to the left.

The moves are thus :—

P. (D), MC (L), BR (U), D<sub>1</sub> (U), D<sub>1</sub>(R), P (R), OG (U), RU (L), F (L), B (L), D<sub>2</sub> (D), D<sub>1</sub> (D), P (R), OG (R), RU (U), F (L), B (L), D<sub>1</sub> (L), D<sub>2</sub> (U), B (R), F (D), D<sub>1</sub> (L), D<sub>2</sub> (L), P (D), BR (D), MC (R), RU (U), OG (U), D<sub>1</sub> (U), D<sub>2</sub> (U), F (U), B (L), P (D), D<sub>2</sub> (R), D<sub>1</sub> (R), RU (D), OG (D), MC (L), BR (U), D<sub>1</sub> (U), D<sub>2</sub> (U), S (L), C (D), BR (R), MC (R), RU (U), OG (U), S (L), D<sub>2</sub> (D), D<sub>2</sub> (L), O (L), MB (U), MA (R), P (R), D<sub>2</sub> (D), D<sub>1</sub> (D), O (L), MB (L), MA (U), P (R).

A further interest can be obtained by trying to get the pig back from the bottom corner to its original position. If anything this is harder than getting to market. But have a try at it.

## After 40 Years' Service

TO many of our readers, the accompanying photograph will call to mind the happy personality of a Hobbies Branch Manager who has given them attention on very many occasions, and has impressed his presence and helpfulness upon them with his genial willingness at Hobbies Branches.

The gentleman concerned is Mr. John Mayle who has just retired from Hobbies Ltd. after 40 years constant service. There must be a very large number of London readers and workers who remember him at Bishops-gate Branch, for he was there from 1915 when the Branch was opened, to 1931. Following that date he took charge of the Branch at London Road, Brighton where



he remained until 1937, then going to the Branch at Southampton.

In all three Branches many of the customers became personal friends, and some who knew him in London have even been to see him at both the Brighton and Southampton shops.

Mr. Mayle's services with Hobbies Ltd. commenced with a small Mail Order business in Paternoster Square in 1897. This grew very rapidly and a branch had to be opened to cope with the orders satisfactorily. This Branch in Alders-gate was the very first opened by Hobbies Ltd. and Mr. Mayle had the pleasure of being its first Manager. There he remained until he went to Bishopsgate, as mentioned.

Apart from the actual Branches, Mr. Mayle was frequently at the Hobbies Stand at the Industries Fair, the Ideal Home and other Exhibitions where the same courteous attention and service were given.

Now Mr. Mayle has given up active work on a deserved pension, and we are sure all who know him will wish him many years of happy retirement at Ramsgate where he is living.



# A MODERN 'ALADDIN' LAMP

**N**OW, if you rub this lamp, it won't—as in the story of "Aladdin"—bring forth a genie who will bestow on you wealth, luxury, Hobbies Weekly free for life and make all other wishes and dreams come true.

Oh, no. But, if you twist the knob in the lamp—abracadabra!—a sudden effulgence of bright light... and peace reigns once more in the bedroom, for it is really a night-light for children.

As poor old Mum and Dad are literally "slaves o' the lamp," this novel affair will make things a lot easier for them. It is made from  $\frac{7}{8}$  in.,  $\frac{1}{2}$  in. and  $\frac{1}{4}$  in. deal or any other soft class of wood. Electrical accessories consist of an ordinary  $4\frac{1}{2}$  volt flashlamp battery, a pea bulb (with a special "Lilliput" cap) and a suitable brass holder, with some S.W.G. double-covered wire.

## Cutting the Parts

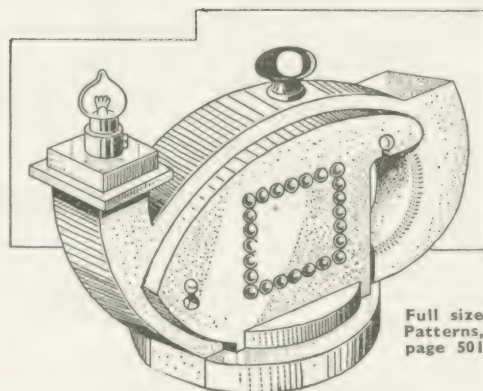
On page 501 will be found full-size patterns of the lamp parts. The casing and sides are shown combined, and it will be seen that the former requires to be cut from  $\frac{7}{8}$  in. stuff, with the latter from  $\frac{1}{4}$  in. wood. One of the sides, incidentally, should not have the screw slots.

When tracing out the parts, note that the battery space is cut in the casing only (see Fig. 1). Owing to the rather unusual thickness of this particular piece, a coarse fretsaw blade should be substituted for the ordinary one, or alternatively a fine pad-saw or scroll saw could be used.

Having cut and cleaned the parts nicely with rasp, spokeshave and glasspaper, glue the unslotted side piece to one side of the casing (as on the pattern), then glue the base piece at each side flush with the bottom. Be sure to have the under surface perfectly flat, otherwise the lamp will rock. It depends on the squareness of the base edge and that of the edges of the base pieces, as you will realize.

## Wiring and Connections

The top semi-circles are glued to the sides as above. It is advisable to screw the loose side



Full size  
Patterns,  
page 501

piece in place prior to adhering the top base piece which must not be pressed tight against the side, but with a minimum of space allowed in view of the coats of enamel.

At this juncture, the spout cape and cap could be glued together. Having made tracks in the spout side and top (as at Fig. 1) for the wire, connect the wires to the holder then, having brought the wires through the cap, glue and screw the lot to the spout top.

The groove for the wire can be made easily with a small piece of a hacksaw blade or with the pen-knife, same being made on the side shown. Having embedded the wires, connect them to a couple of brass roundhead tacks. The tacks are then hammered centrally in the roof and the wire groove filled in with plastic wood.

## Connections and Switch

If desired, you could dispense with the knob switch, as a twist on the bulb would suffice to switch on and off the light. If you wish to include it, however, obtain the brass knob recommended and drill a suitable hole through the casing for the threaded shank. The holes should be tight enough to catch the threads and allow easy movement. The point of the shank must come down on the long arm of the battery and thus break the circuit, the springiness of the arm—when released—causing contact again.

## The Battery

The battery arms, of course, must always be bent as seen at Fig. 1, and this is a comparatively simple procedure when inserting a refill. The bulb, battery and side piece could be removed and the article enamelled in a bright colour such as red or green with a red spout cap.

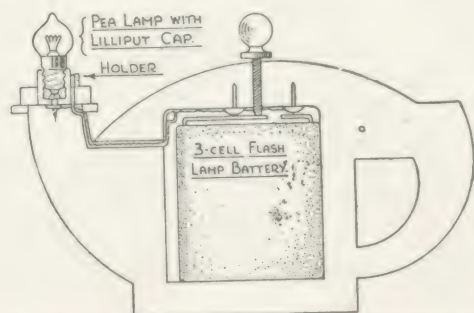


Fig. 1—Side view showing wiring and alternative knob switch

## MATERIALS REQUIRED

- 1 piece deal—8ins. by 4½ins. by ½in. thick.
- 1 piece ditto—5ins. by 4ins. by ½in. thick.
- 2 pieces ditto. 6ins. by 6ins. by ½in. thick.
- 2 roundhead brass screws. Size ½in. by 6.
- 2 roundhead carpet nails.
- 1 3-cell flashlamp battery (4½d.)
- 1 pea lamp (with Lilliput cap) (6d.)
- 1 brass (bracket) holder (2d.)
- Some S.W.G. double covered wire.
- Electric fittings obtainable locally.





# FRETWORK

A further article of hints and tips to all using fretwork tools.

**W**E have already mentioned in this series of hints for the fretworker, the question of glue, and how it should be used thinly. It cannot be impressed upon the worker too much, however, that in gluing, the parts should be held as tightly together as possible until the glue is set.

Do not just lay the two boards on top of each other and hope for a satisfactory result. They have to be squeezed together to eject all the air, and to give the glue and wood surface time to body up as one.

This question of fitting boards together is usually straightforward, and for this purpose the little light steel cramps sold quite cheaply by Hobbies Ltd. are ideal. They are strong, easily fixed, and can be used in all sorts of positions.

Do not, however, put them on to the actual work without affording some protection.

## To Prevent Marks

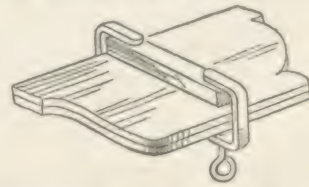
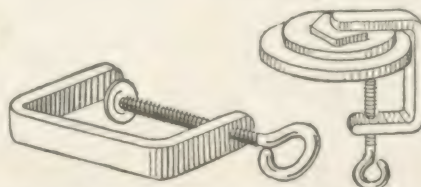
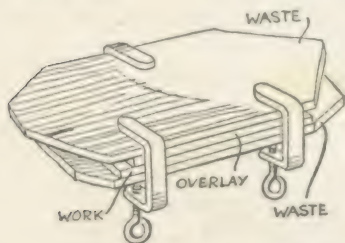
Obviously if you are going to make the cramp grip, you will have to turn the nut tight and so cause the head of it to bite into the wood. This will leave a nasty circular mark. To overcome it, therefore, put in two other odd pieces of wood to act as a sort of buffer between the work and the cramp. This buffer board need not extend over the whole surface of the work, but it is better if it can do so.

Or, of course, if you have a wide strip running across the work it can be cramped at both ends as shown in the drawing. Or if you have a small circular piece as again shown, then you can put the cramp over so the grip is in the middle.

## Hints in Cramping

There are larger spring cramps which can be used for larger work, if, however, you only have the small ones, you can often overcome the trouble by adding strips or larger pieces of buffer boards as mentioned before.

Get the cramp as far on to the wood as possible, and get the strips or support pieces of thick enough material to prevent them warping or cracking. If necessary you can add two or three of the cramps, adding little buffer pieces beneath in every case.



Examples of how to use the small steel cramp in gluing up parts of woodwork

One point about these little steel cramps is that you must not apply too much pressure on them. If you do, leverage is so strong that you will force open the jaws, and the top flat piece will simply gape away from the wood instead of being flat on to it at the appropriate point.

Of course, if you have not these little cramps handy, you can always provide the weight by

## CRAMPING, OILING AND TREADLING

putting a pile of books, or better still, some household weights in position. In any case, a flat board between the books and the work is necessary, to keep the whole thing flat.

Do not be in a hurry either after gluing, to take the parts away to see if they are alright. Leave until the glue has thoroughly set, and in the meantime be going on with something else, so your patience is not being tried.

## A Sliding Machine

Workers with the fretmachine are sometimes over-energetic in their treadling. They complain that the machine slides away from them as they work. This should not be if you sit in the correct position with your chair just right for the legs to pedal properly.

The position of your feet may have something to do with this sliding business. You may have your feet too low down on the pedals so they are apt to push forward as well as up and down.

A lot of people work with their toe only on the left-hand treadle. This has a tendency to slide the machine because the leverage again is forward a little too much.

Get your feet evenly balanced on the treadle because this is scientifically worked out to be correctly pivoted for easy work.

## A Simple Fixative

If you are still so energetic that the machine slides, you can overcome it in this way. Tie a thick piece of cord to the bottom of the leg or round the leg where the crossbar juts out.



Then carry it round the leg of the chair on which you are sitting, across to the other leg of the chair, and finally to the other front leg of the machine.

Get the length just right so the chair is in position when you are treadling, then you will find that your own weight when you are sitting at work will hold the string taut and prevent the machine from moving.

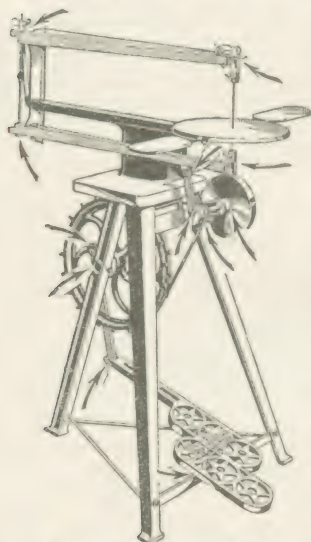
### Screw to the Floor

If you can, of course, the best plan is to utilise the special holes and slots made in the feet. These are to take screws which hold the machine down to the floor. This is the ideal method, but is a little awkward if you have to take the screws out to move the machine every time you cease labour.

If the people in the flat underneath complain of the vibration, you should add some cushions under the three feet of the fretsaw.

These cushions can be small circular rubber heels or thick pads of rubber cut from a motor tyre, or even a thick piece of felt or baize. Screw a piece of wood to the foot of the machine itself, then glue these cushion pads on the underside.

You cannot, of course, glue them direct to the metal foot itself.



Where to oil a machine

Machine users, too, must not forget they can save themselves a terrific lot of wind by adding one of the little dust blowers to the top arm. This blower is illustrated here in position, and is supplied at the small cost of 6d. It is a tiny cone-shaped gadget which creates the wind by its own movement.

### A Simple Blower

As the arm goes up and down rapidly, the weight of the blower causes a bellows-like action of opening and closing, and so forces a spout of air direct on to the work.

This gently blows the sawdust away, and keeps the cutting line free. It is certainly a gadget worth having, and one which is easily affixed as can be seen in the picture.

Another thing to remember is that any machinery wants oiling, and the life of your own treadle fretsaw can be increased very considerably by the addition of a spot of oil on any moving part. That is, of course, except the sawblade itself.

Where there are any revolving or rocking pieces,

a touch of oil now and then makes all the difference. It saves unnecessary labour in treadling, and also prevents the wear of the part concerned through friction.

### Where to Oil

We give here a drawing with arrowheads indicating the parts which require a spot of oil every now and then. We do not, of course, mean flood the whole thing so the oil flies all over the place, but rather add just a little skin of oil by means of a feather drawn across the necessary part.

In some cases you have definitely enclosed axles such as that for the balance wheel, or the driving wheel, and here a tiny hole is provided for the oil to run direct to the bearings. In this case, one of those little spouted oilcans is helpful.

But again, do not think when you have put a spot of oil in the hole, that the bearing is suitably lubricated. You can see this spot of oil in the top, and it has

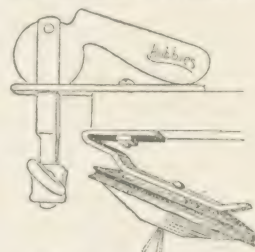
gone no further. Work it down into the hole with a feather or a slim shiver, and you will be surprised how much more can be added without over-running.

Work the parts backwards and forwards, or round and round to ensure the oil does get into the movable pieces, but afterwards wipe away any lubrication which has flooded out.

If you do not, the sawdust will get on to it and possibly work into some place where it is not wanted, and create trouble.

### No Oil on the Belt

The belt of the machine must not in any circumstances be oiled, because you certainly do not want that to slip. You want it actually to grip the



A Blower attachment

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driving wheel, and if you find it is not doing so correctly, endeavour to trace the cause.

If the belt has actually become oily, lay it in some powdered whitening for a few days. If it is not oily but still slips, rough up its surface with a rubbing of glasspaper so it gets a grip.

#### A Slipping Belt

Sometimes the cause of this slipping is that the belt has become lengthened and slack. You know how it is with the chain of a bicycle, and the remedy is the same. Take the belt off the driving wheel and extract the small fastening pin which holds the two ends together.

Replace over both driving and pulley wheel in the normal position, and overlap the two ends as much as possible. By pulling the belt quite tight

like this, you will see exactly how much can be cut off. It may be  $\frac{1}{4}$  in. or it may be  $\frac{1}{2}$  in.

Cut this off with a very sharp knife, but leave a clean flat end which can bed up against the other one. Bore a hole to take the wire, and keep this hole clean and true.

The wire can be bent back with a pair of pliers, and the two parts of the belt joined together as before. See the wire beds well into the belt in order that it does not catch on the wheel or make an unnecessary clicking noise as it passes round.

If your belt is again too large to make it serviceable any longer, then you must replace it with a new one. These are obtainable for any of the Hobbies machines at quite a reasonable price.

(To be continued)

## HOW TO MAKE A BOW SAW

THE making of a bow saw presents little difficulties to the average worker. The diagram shows a typical design and it might be mentioned that while other models have a threaded rod of brass and a thumb-screw for adjusting the tension of the frame, the cord (G) and dowel (H) serves equally as well.

The frame parts should be cut from  $\frac{3}{4}$  in. thick oak or other hard wood. No dimensions are given because such will be determined by the length of the saw desired and obtained locally. If 18 ins. long, the bearer rail (B) should be 11 ins. between the arms (A).

#### Mortised and Tenoned

The bearer rail is tenoned into mortises in the arms. This is done so the rail is firm, but free enough to swivel.

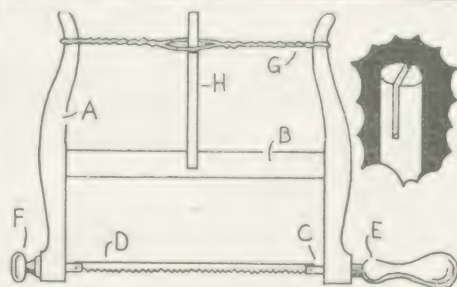
Having done this, bore suitable holes right through the ends of the arms for a 2 in. and 3 in. by 14 roundhead brass screw, then cut the arms to shape and round the crook or cord ends with spokeshave and glasspaper.

If you can only get flathead screws the size given, remove the heads. With the others, cut down the head slots to about  $\frac{1}{2}$  in. deep with a hack-saw (see inset of beheaded screw) and drill single 1/16 in. holes through at the sides for wire nails or cotter (split) pins, these being used to keep the ends of the saw in the screw splits (C).

#### Suitable Handles

The 3 in. long screw is driven into a handle (E) of a bradawl, while the 2 in. screw is screwed into a wooden door-knob (F). If you use roundhead screws, of course, insert them into the arm holes prior to screwing to the handles.

With the plain screw shanks, the screwing can be done first, after which the shanks are inserted and the blade connected with cotter pins or wire nails,



the latter being beheaded and bent not to fall out or scratch the hands during operations.

\* Twist cord is wound around the arms thrice. Knot the ends, then insert the dowel (H) which must bear on the rail (B) as shown after twisting the cord. One side of the dowel should be planed flat to rest evenly on the rail.

#### Points about Bow Saws

Many professional woodworkers prefer the bow saw to a keyhole saw, pad saw, scroll saw, etc. It can do the work of all these implements, but unlike the keyhole saw, it is handicapped by the width between the cross bearer and the saw blade. That is the only drawback, but it is surprising the amount of work accomplished with these peculiar-looking saws.

The cutting is usually done over a stool or in the bench vice. The implement is held by the handle (E) with both hands and the sawblade guided accordingly.

If cutting a shape down one side of a board, the blade is twisted around (at both ends) so the frame is hanging over the free side of the work. It is back-breaking work, but it saves many a journey to a machine shop.

When adjusting the blade as stated, be sure it is not in twist; you will know this when the blade refuses to keep to the pencilled lines. The cutting angle should be nearly vertical.

If you are cutting through  $\frac{3}{4}$  in. stuff at an angle of about forty-five degrees, you are really making the wood seem as though it were 1  $\frac{1}{2}$  ins. thick, and moreover, the shaping at the bottom of the work will be badly out of true.



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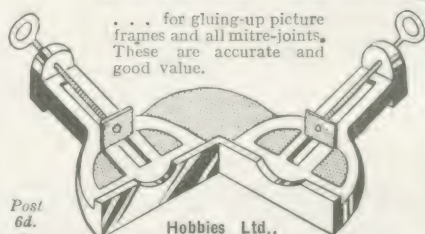
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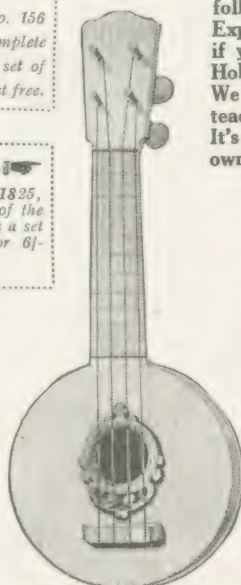
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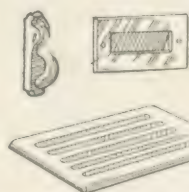
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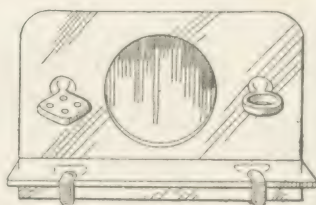
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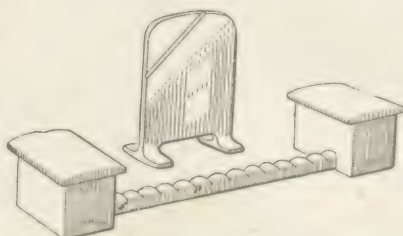
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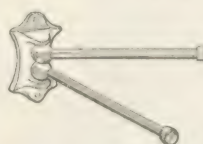


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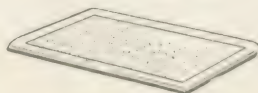


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# TWO MODERN ELECTRIC TABLE LAMPS

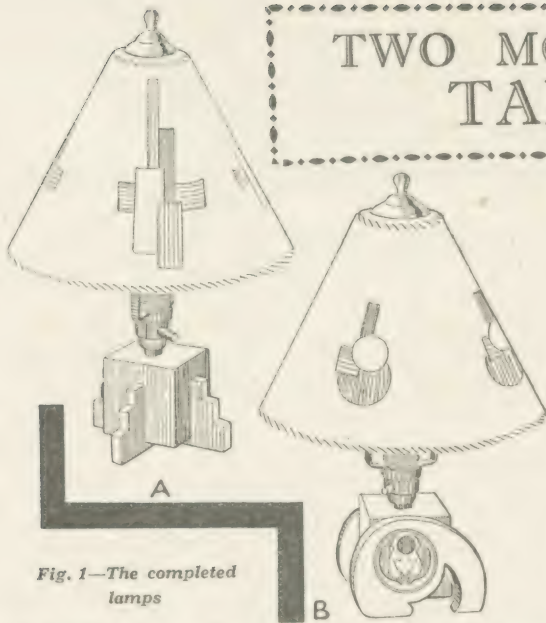


Fig. 1—The completed lamps

**T**HE Lamps shown in the sketch are of a type very popular just now, because they are portable, and can be used on any side table or even on a bedside table.

Dealing with lamp A shown in Fig. 1, the first thing to do is to make the square body of the stand. This is all of  $\frac{3}{4}$  in. wood, and cut as in the detail of parts in Fig. 2. Holes are cut in the top and bottom pieces, the top one being for the brass screw fitting and shade support, while the hole in the bottom is for the flex to pass through.

Cut the squares and see they fit together properly, before actually gluing them up.

The four "stepped" decorative feet are each of  $\frac{3}{4}$  in. wood, and drawn to the outline shown on the right in detail Fig. 3. Having cut one correctly, lay the finished part on the remaining wood and draw round it with a sharp pointed pencil to get the other three feet.

In fixing the feet, first make a pencil line centrally on each side of the square body of the lamp. Coat the back upright edges and the projecting ledge with glue and press them into place.

The Lamp (B, Fig. 1), has a body part made as the one at A, and the only difference is in the

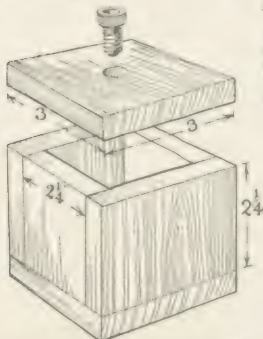


Fig. 2—The hollow box

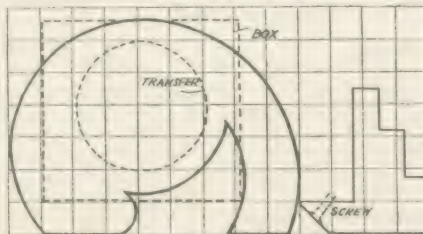


Fig. 3—Shapes for the sides

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side decorative pieces. The larger detail in Fig. 3 shows the outline of these pieces and the shape may be lined in through the  $\frac{1}{4}$  in. squares.

The dotted lines in the detail show exactly the position in which the side feet stand in relation to the body of the lamp, and, as before, glue will be used as fixing.

After cleaning and adding what finish is desired, two transfers may be fixed in the circles shown. The transfer suggested in the sketch is Hobbies No. 1014, sold at 1d. each.

## The Shade

A piece of the special lampshade paper or parchment will be wanted measuring 20 ins. by 10  $\frac{1}{2}$  ins. and on this will be marked out the shape required as follows. After setting out two arcs, one 10  $\frac{1}{2}$  ins. and the smaller one 3  $\frac{3}{4}$  ins., rule off a line cutting the centre point and the outer curve.

Then, carefully, step round the outer line with the compasses or dividers set at 1 in. space until 26  $\frac{3}{4}$  ins. is reached. At this point connect a line to the centre again when the true outline for the shade is complete. After allowing a  $\frac{1}{4}$  in. on one end of the piece for lapping and gluing down, cut along the outline.

Next make two rings of brass or copper wire, one small one to fit just inside the top of the cone, and one large enough to go round the bottom edge. A number of clean punched holes or short cuts must be made in the parchment just where the wire rests. Finally, some tinted ribbon tape is threaded through these and round the wire hoops. Two typically modern forms of decoration are shown which might be carried out in bright tints or dyes. The enlargements on the shades should be made from Fig. 4 where the designs are seen crossed with  $\frac{1}{4}$  in. squares.

To form a fixing for the shade to the support supplied with the lamp holder, a disc of  $\frac{3}{16}$  in. or  $\frac{1}{4}$  in. wood should be cut 3 ins. diam. and bevelled off on its edge.

The complete lamp holder and switch with wire lamp support can be bought from Hobbies for 2/9, and a piece of parchment paper for the shade may be got for 5d. postage extra.

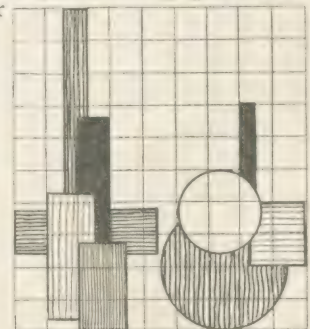
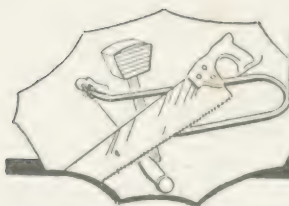


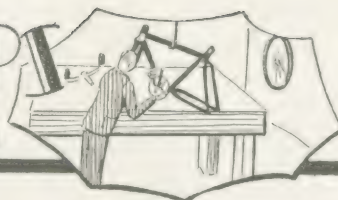
Fig. 4—The shape decorations





# HINTS & TIPS

## WORTH KNOWING



For original Tips published the sender will receive a Hobbies Handy Propelling Pencil. We cannot acknowledge all those received, or guarantee to print them. Send to The Editor, Hobbies Weekly, Dereham, Norfolk. Keep them short and add rough pencil sketches if possible.

### Prevents Splitting

I AM sending you a hint well worth knowing. On a chisel that has to be pounded by a mallet, the best thing to do is to fasten a lemonade bottle metal



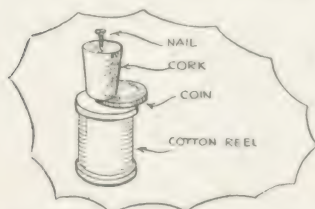
cap to the handle as shown in the diagram. This prevents the wooden handle from splitting. When the old cap is worn out it can easily be replaced by a new one.—(A. Marshall).

### Blade Holder

HERE is a useful hint for a simple fretsaw blade holder. Get a piece of Elder twig the length of a fret blade and place in a warm spot. When it is dry, it is a simple matter to bore the wide pith out, and with a cork in one end it makes a handy fret-blade container.—(G. E. Wilson).

### To Pierce a Coin

TAKE an ordinary cotton reel or bobbin, and place the coin over the hole at the spot where you wish to pierce it. Then push a thin nail through a cork and put it upon the coin. Hold the cork tightly and give the nail a few sharp taps with a hammer,



when it will pierce the coin at the required place. One thing must be particularly noticed. Be sure that the nail is immediately over the hole in the cotton reel.—(R. Denyer).

### Overlay Fixers

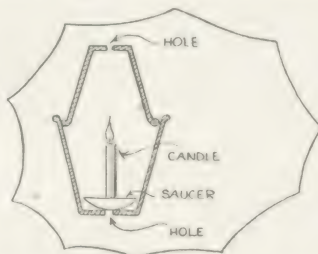
WHEN nailing on an overlay, a good idea is to use old gramophone needles. They are hardly noticed on the finished article.—(J. Forrest).

### To Loosen Screws

YET another way to loosen stubborn screws, is to apply a little vinegar, and let it soak in before using the screwdriver. This is often successful when oil fails.—(D. V. Campling).

### A Bedroom Airing

ALL that is required are two flower pots, one smaller than the other, and a saucer. Place the saucer inside one flower pot and invert the other as shown



in the diagrammatic section. The candle burns inside and will keep alight for about eight hours.—(J. R. Prevett).

### Chisel Handles

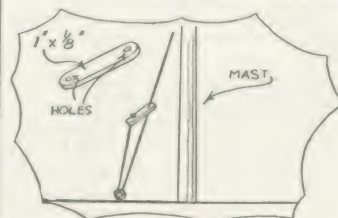
IF your chisel handles are wearing back through constant hammering with a mallet, just put a boot stud into the end of the handle and it saves them from going any more.—(W. J. Nott).

### Small Wheels

IF you are making a model cart with small wheels which have a radius of about 1 in., I find a good tip for making them is to procure a centre bit and drill a hole. If you are careful and watch how you are doing it, you can get quite a good wheel. When it falls out you only need a file to make it flat.—(H. McWhinnie).

### Model Yacht Cleats

I FIND when making model yachts that it is sometimes difficult to find a good mast cleat



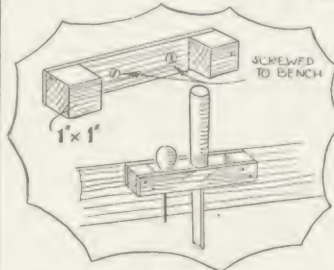
to hold up the sails. A useful one can be obtained from a boot polish tin, as shown in the diagram.—(K. Clark).

### String Clip for Models

THIS simple gadget will overcome the difficulty of tying knots in the rigging of model yachts. Obtain a piece of wood 1/2 in. long and 1/4 in. thick. At each end bore a hole as shown. Pass the rigging cord through one of the holes, and tie a knot in the end to prevent it slipping. The other end is threaded through a screw-eye in the deck, through the other hole and then tied round the mast.—(E. Thompson).

### A Handy Tool Rack

TAKE two pieces of plywood or stripwood 1 in. wide any suitable length, and thickness, and two blocks of wood 1 in. square. Nail blocks of wood at each end of strip of wood, screw to bench as in the diagram. Then nail to other



strip of wood the two blocks. If done correctly it should provide a handy tool rack for handled tools as illustrated.—(H. Hartley).



# The EDITOR'S NOTES



THERE are a lot of readers interested in electricity as well as fretwork and whenever possible I endeavour to combine the two pastimes. An example is shown this week on page 491 where you have a modern Aladdin Lamp which is cut out in wood from full size patterns and which is provided with a battery to light it up. Such novelties as this provide an interesting piece of work and are just the articles to sell readily amongst your friends. Possibly you know of other similar little gadgets, so don't forget I am always glad to have your suggestions.

AS promised, too, we are having a special little Watch Stand Design next week in connection with the birthday of the Chief Scout—Lord Baden Powell. That wonderful patriot is 81 years of age on February 22nd., and many past and present members of the Scout Brotherhood will be glad of the opportunity of making this little reminder of the occasion. The patterns, by the way will not be the full size gift sheet, for they will be for making the Clock shown on page 493.

ANOTHER design which will be popular, I know, is the one I am arranging in connection with the great anniversary celebrations in Australia. A specially appropriate Wall Plaque with typical features of that great country will be a gift design the week after next.

THERE are all kinds of ways of earning pocket money with your fretsaw, and orders often come along when you least expect them. For this reason it is always worth mentioning to your friends what you can do. Talk about it, and without actually begging for work, let them know you are willing to undertake special jobs for them. Remember that they, too, have friends and often hear of an opportunity for a job which you would not know about. They tell their friends and so the knowledge of your ability gradually spreads and jobs come along from unexpected sources.

TAKE this instance of a reader in East London, South Africa. "The other day" he says "I was told by a friend at work that a lady who owns an Arts-Crafts studio wanted to see me. I went down, and she asked if I could cut out some designs for her. I said I could, and took them. When I had finished I took them down, and she paid me quite well for them, and also gave me some more work to do. She also said that I had done my work very neatly, remarking that she could not get anyone to do fretwork in town."

WHICH just shows you it pays to talk about your capabilities because I know there are a number of workers in this particular town. The reader concerned, by the way, wants to form a Club of anyone interested, so perhaps others in and around East London will get in touch with him. The reader is Cecil Spence who lives at 15 Western Avenue, P.O. Cambridge, East London, South Africa.

THOSE who like to exhibit their work will be glad to hear of a special Hobbies Exhibition being held in connection with the Rotary Club of Warrington. The secretary says the show will be on March 17th, 18th, and 19th at the Pattern Hall, Winmarleigh Street. There is a wide range of classes, including Fretwork, Models, Photography, Puppet Making, Woodwork, Nature Collections and all those which are of special interest to our readers. Certificates of merit are being awarded, so I want all readers who can to show what they can do. Entry forms and particulars are obtainable from the hon. secretary, Bernard J. Broadbent at "Gilford," Middlehurst Rd., Grappenhurst, Warrington.

WE who are interested will shortly be turning to gardening work, and I am just wondering if there are enough enthusiasts to warrant a series of articles on the subject during the spring. I should like to hear from you about it please.

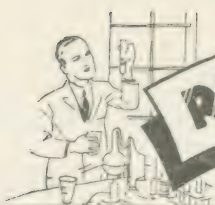
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Correspondence should be addressed to The Editor, Hobbies Weekly, Dereham, Norfolk, and a stamp enclosed with the Reply Coupon from Cover iii if a reply is required. Particulars of Subscription rates, Publishing, Advertising, etc., are on cover iii.





## REPLIES OF INTEREST



### Pump Sprayer

**I** HAVE acquired a small foot-pump, and would like to construct a garden and paint sprayer. —(E.M.C.)

**W**E do not recommend you to make a paint sprayer—ready-made articles can be bought very cheaply. However, if you prefer to experiment, proceed on the following lines. First provide a strong metal container, such as a gallon paint drum or any clean strong metal cylinder. Provide on it a non-return valve, such as a motor car type valve, and connect your pump delivery to this. Provide also a safety valve (set to “blow” at about 25 lbs. per sq. inch), also an outlet pipe, about 3/16in. bore, for connection to the paint “gun.” The paint gun can be made with a strong glass jar with a screw cap top. Into the top fix a small bore brass tube (about 1/8in. to 3/16in. bore and terminating about 1in. above the screw cap). To this tube is soldered another piece of brass tube about 3/8in. bore, with a mixing jet or nozzle with a fine nozzle (about 1/16in. or smaller), and at the back pipe connection for the rubber hose that goes to the air container. The end of the upright pipe may have to be nozzleed down a little, but this is a matter for experiment. The action of the sprayer is that the air rushing out of the nozzle sucks up the paint from the container and carries it in the form of a spray on to the work to be painted.

### Making Decoy Ducks

**C**AN you help me to find a material for making decoy ducks. I have got full size plaster casts from clay models (in the round) and wish to make waterproof models of these that will also float. Of course, I could use papier-mache, but wondered if there was some composition rather on the same lines—which I could press on to the moulds and lift off when set, then paint in natural colours. Someone has suggested old gramophone records melted down, but I don't know if this would be practicable. I should be so glad if you could help me—but feel I may have asked you a rather impossible

suggestion, and not made myself very clear either.—(R.Y.)

**T**HE making of waterproof, floatable decoy ducks certainly presents some problems, and will very likely necessitate a certain amount of experimentation. However, we suggest as a start that your plaster model be cut into three, or that you make three separate casts from the model. The lower part should be horizontally divided and the upper part severed vertically along the centre line. The idea is to use this bottom part like a hull of a boat, and to put some cork in it. When finished, a small weight may have to be fixed on the outside to ensure the duck floating “right way up.” The cork will ensure the duck floating even if it has been riddled with shot. (The holes could be stopped later on with plastic wood). The division of the upper parts is necessary to enable the model to “draw” or allow it

hesion. Next brush over the silk with shellac varnish, scatter the powdered cork or sawdust over it, or if the bottom is reasonably flat, apply a thin piece of sheet cork or fretwood and cover it with another piece of silk. Gradually build up a reasonable thickness of cork dust and shellac varnish, pressed well down. Allow it to dry, apply an outer cover of thin silk or muslin, give it a coat of shellac varnish and allow to dry. Then remove from model. Treat the other parts in the same way and fasten together by strips of silk fixed on with shellac varnish, or by bindings of thread wherever possible. When dry, paint in natural colours and finish with a coat of matt varnish. Shellac Varnish dries very quickly, but add gold size if quicker drying is desired.

### Preserving Rabbit Skins

**C**OULD I preserve and keep soft and pliable, rabbit skins for the backs of gloves?—(J.V.T.)

**T**O preserve rabbit skins for gloves, tack the skin stretched out on a board, with the flesh side uppermost. Scrape it clean of flesh, but be careful not to tear the thin grey skin on which the fur grows. Now rub the skin with a mixture consisting of a tablespoonful of saltpetre and a pinch of alum dissolved in half a gill of warm water. Rub it likewise twice afterwards, at intervals of two days, not removing the skin from its fixture to the board. Some strong pepper can be used instead of the alum if you have none. When the skin is quite dry, rub a small quantity of clear oil or glycerine into it, just to make it pliable. Some people first soak the skin for a day in water to which alum has been added by previously boiling it, dissolving the alum and letting cool, then when the skin is nearly but not quite dry, stretching on a board as above and treating as above. Arsenical soap is often used for rubbing on skins as a surer, but it is not recommended unless you can be trusted with dangerous chemicals, and are old enough to use such. Finally clean the fur part with warmed bran.

## Special Birthday Design of the Chief Scout next week

to be removed. Papier-mache would not be very practical for home construction, it needs a good pressure and should be moulded in not on the model. The most likely material to meet your requirements is powdered cork or sawdust, used bone dry (that is free from water or dampness), and bound together with shellac varnish. To make the boat part, cover the model with thin coarse silk or any very flexible material such as butter muslin—having first covered the model with a film of vaseline to prevent ad-



Patterns for  
making an  
ELECTRIC  
"ALADDIN"  
LAMP  
(see page 491)

BASE TOP.

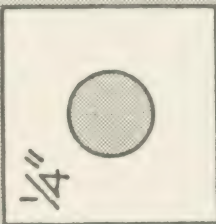
CUT TWO FROM  $\frac{1}{4}$ "

BASE SIDE

CUT TWO FROM  $\frac{1}{2}$ "

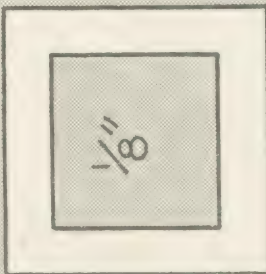


SECTION.



$\frac{1}{4}$ "

CAP.



$\frac{1}{8}$ "

SPOUT

CAPE.

LAMP CASING  
AND SIDES.

CUT CASING FROM  
 $\frac{7}{8}$ " WOOD AND SIDES  
FROM  $\frac{1}{4}$ " STUFF.

$\frac{7}{8}$ "

$\frac{1}{4}$ "





## MISCELLANEOUS ADVERTISEMENTS

The advertisements are inserted at the rate of 2d. per word prepaid. Name and address are counted, but initials or groups, such as E.P.S. or L/11/6 are accepted as one word. Postal Order and Stamps must accompany the order. They will be inserted in the earliest issue. To sell anything except fretwork goods or those shown in Hobbies Handbook. Orders can be sent either to Hobbies Weekly, Advertisement Dept. 30/32 Ludgate Hill, London, E.C.4, or Dereham, Norfolk.

**STAMPS.** Collect No. 1 of new series, real photographs, 8x6, of famous British railway engines, free to applicants for approvals. No callers. Enclose 2d. postage.—A. Hamilton, 14 Cursitor St., London, E.C.4.

**L**ONELY? Then write Secy., U.C.C., 16BB, Cambridge St., London, S.W.1. Genuine. Established 1905.

**I**NVENTIONS PROTECTED. Booklets gratis.—Reginald W. Barker & Co., Patent Agents, 56 Ludgate Hill, E.C.4.

**A**MATEUR ENTERTAINERS, Concert Parties. Comedy and burlesque sketches, Crosspatter Turns, Ventriloquists' Dialogues. Send for list.—Finn, Author, Magdalen Street, Colchester.

**I**VORINE (white) about 1/32in. thick. Just the stuff for fretwork overlays. In sheets 12 by 6ins. 1/6; post 2d. Also Xylonite (black) 1/3.—Hobbies Ltd., Dereham.

**R**ETIRAL SALE. 500 different 1/9; 1,000 different, 3/9; 500 different, British Colonials, 9/9; 50 different Coronation 9/-; post paid U.K. 100 different stamps free those asking sheets, includes St. Helena, Old Persia, China, Sierra Leone. Cat. 1/- List free.—F. McAuslan, Stepps, Glasgow.

**F**RAME YOUR OWN PICTURES! We supply mitre block, cramps, mouldings, etc. Easy, fascinating work. Profitable, too!—Hobbies Ltd., Dereham.

**100 STAMPS** all different, free to approval applicants sending 2d. postage.—Errington Macquire (O), 51 Atkins Road, London, S.W.12.

**40 BRITISH COLONIAL STAMPS** (15 pictorials). Free to approval applicants sending 2d.—Ace Stamp Co., 118 St. Peter's Road, Reading.

**M**OVIES AT HOME. How to make your own Cinema Projector. Particulars free.—Moviescope (H), Pear Tree Green, Doddinghurst, Essex.

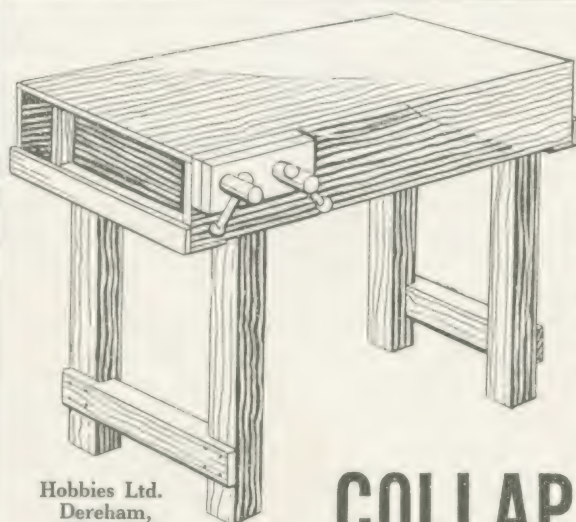
**P**OLISH OUTFIT 2/3; post 6d. Comprises three kinds of stain crystals, woodfiller, cotton-wool rubber, bottle of Hobbies "Lightning" polish, glasspaper and instructions.—Hobbies Ltd., Dereham.

**S**TARTLING OFFER! Pictorials, commemoratives catalogued over 10/- for only 2/-. Super stamp trading course, 1/6!—68 Butler Road, Dagenham.

**L**ATHIE AND FRETSAW 95/- carriage forward. Treadle-driven and just the thing for the home handyman. Write for details.—Hobbies Ltd., Dereham.

**P**ADDLE YOUR OWN CANOE costing less than 30/-. Tested, seaworthy. Blue prints 2/-, post free.—Wills, "Ivydene," The Avenue, Pontypridd.

**I**T'S EASY TO ENLARGE DESIGNS, pictures, etc. up to eight times original size with Hobbies all-steel Pantograph. 4/6; post 6d.—Hobbies Ltd., Dereham.



Hobbies Ltd.  
Dereham,  
Norfolk

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**3ft. 6ins. . . . 30/-**

*Carriage Forward*

## COLLAPSIBLE BENCH



# STAMP COLLECTOR'S CORNER

## Notes for Beginners

**T**HIS is the concluding portion of our series specially written for those just taking up the hobby. In our issue dated Jan. 22nd, we dealt with the general arrangement.

Moreover, careful arrangement means that you will remember the stamps that you have, so when you want to exchange with your friends, you will know what spaces you are going to fill, and not exchange a stamp for one which you have already got in the album.

Another tip which will make a great difference to the look of your pages is this. If you place a stamp in the wrong position (and it will be very marvellous if you do not) then do not attempt to take it out immediately, but allow the mount to dry.

Then you will find that it will peel off easily, but if you try to take it out at once then the page will be torn, or else the stamp will go.

Show your collection to as many friends as you know will be interested. It is quite possible that they will be able to find some stamps for you. In any case the more people know that you collect, the more stamps you are likely to get.

Now the next point is open to criticism. Some collectors refuse to take a stamp out of their album, while some are always ready to exchange one from their collection for another.

In the opinion of the writer it is advisable to strike a happy medium. It may happen that you have a stamp which a much more advanced collector than yourself wants, and one for which he is willing to give a number of stamps in exchange. Then, the writer thinks, it would be better to let him have it, and say "Thank you" for the increase which comes from his greater numbers.

Of course you want to know who it is that wants to exchange so you may be sure that you are not getting 'done,' but it is not very likely that you will get many very valuable stamps at first so that numbers are what you want.

When you have your thousand, then it is time to stop this plan. But by that time you should know something about the hobby and be able to judge if you want to exchange.

Lastly, go for good specimens from the start. A good specimen is one which is not torn, and which has not had the design obliterated by the postmark.

You are sure to find stamps which puzzle you as to the country from which they come. These may be sent up to Hobbies Weekly quite safely, losses in the post these days are very unlikely. But, remember, to expect us to tell you where to put a stamp we have not seen is asking too much.

## More Notes on New Issues

**G**REECE has just issued a very ambitious set of stamps. There are thirteen of them altogether, and they attempt, through their designs, to give a pictorial story of the history of Greece.

If you want to realise what a difficult task this is then take a pencil and paper and note down



*A curious game from Greece*

thirteen facts which you would use if you had to describe the history of Great Britain in such a number of designs. Then you

**Our Stamp Expert will always give advice on stamp matters, but cannot estimate values**

must realise that the history of Greece is twice as long as our own.

The lowest value is here illustrated. Look at it carefully for it depicts some of the earliest games—a type of bull fighting with the odds definitely in favour of the bull.

○ The contestants had to grasp the horns of the bull and so escape from the charge it was making. Apparently other contestants helped the one who was somersaulting over the back by catching him. At least that is what the person behind the bull appears to be doing.



*A famous Italian violinist*

The contestants seem to be boys and girls, probably slaves. The reason for this assumption is, of course, because the gladiators were nearly all slaves, and if they put up a good show then they were possibly given their freedom. The crowd decided their fate, and the method of showing the decision was a wave of the handkerchief for success, and the thumb pointing down if the decision was against them.

The other stamps of this interesting set show progressively the history of the land.

Italy has a commemorative set of ten stamps bearing the portraits of five of her famous men.

The example here chosen is that of Stradivarius, who lived from 1644 to 1737. The portrait shows this man with a violin in his hands. He was the celebrated violin maker whose instruments are recognised as the best ever made.

Some of them are still in existence, though the price of these is far in advance of what he got for one when he made it. He sold them for about four pounds, but now it is very doubtful if you would be able to get one for as much as three thousand pounds.



## BRITISH-MADE FRETFRAMES

The finest handframes for fretwork in the world are made by Hobbies Ltd., and they are used all over the world. They have special saw grips which are unequalled and are made of material which will last a lifetime. You have only to compare them with any others and you will see their superiority immediately.

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for Hobbies  
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12 in. - 4/3 16 in. - 4/9  
14 in. - 4/6 18 in. - 5/-

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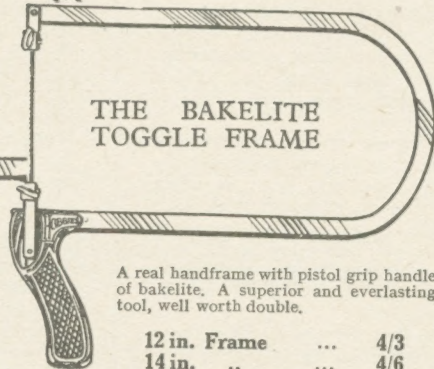
### THE TOGGLE LEVER HANDFRAME



The latest pattern frame with comfortable handle. The tension of the saw obtained by throwing the handle forward as a lever

12 in. 3/3 14 in. 3/6  
16 in. 3/9

### THE BAKELITE TOGGLE FRAME



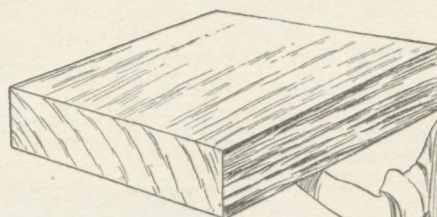
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12 in. Frame ... 4/3  
14 in. " ... 4/6  
16 in. " ... 4/9

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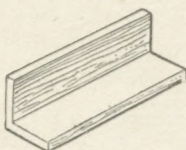
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### DESIGN SHEETS.

The presentation Design Sheet is given only with current copies of Hobbies Weekly, and not with back numbers. The designs, however, can be obtained separately, from Hobbies Ltd., price 4½d., post free, or 10d. in the case of double size sheets.

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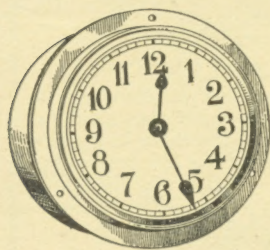
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The Editor is always pleased to consider suitable articles for these pages, which, if accepted, will be paid for at the usual rates. While every effort will be made to return unsuitable contributions (if stamps for that purpose are sent with them), the Editor does not accept any responsibility for their loss.

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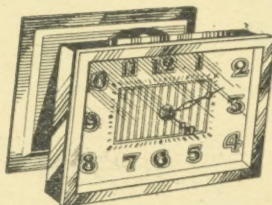
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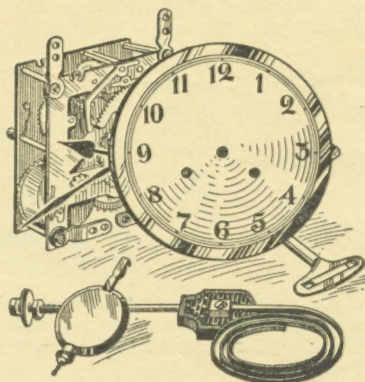
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# Planes that give You more for Your money

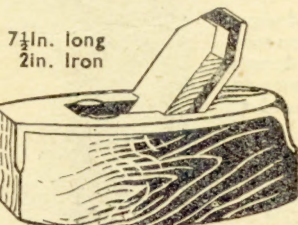
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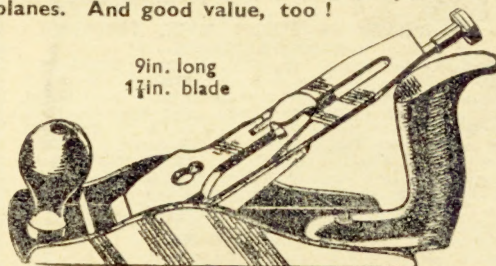
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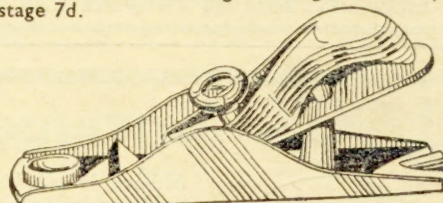
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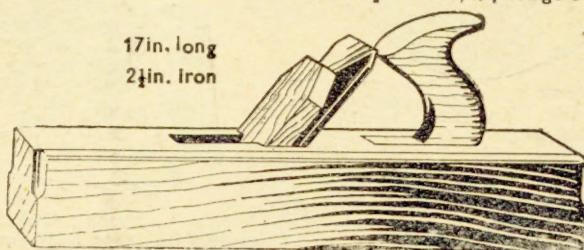
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